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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/675,256	09/29/2000	Larry L. Elyea	08049.0775	1182

22852 7590 12/17/2003

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER  
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1300 I STREET, NW  
WASHINGTON, DC 20005

EXAMINER
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FREJD, RUSSELL WARREN

ART UNIT	PAPER NUMBER
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2128

DATE MAILED: 12/17/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/675,256

Applicant(s)

ELYEA ET AL.

Examiner

Russell Frejd

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 March 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

In re Application of: ELYEA et al.

***Examination of Application #09/675,256***

1. Claims 1-17 of application 09/675,256, filed on 29-September-2000, are presented for examination.

***Claim Rejections under 35 U.S.C. § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 4, 5 and 7-16 are rejected under 35 U.S.C. § 102(b) as being anticipated by the article authored by Allen et al. (hereinafter Allen), entitled "Application of Virtual Reality Devices to the Quantitative Assessment of Manual Assembly Forces in a Factory Environment".

3.1 Allen discloses a system for performing in-situ quantitative measurements of manual forces and postures applied by human assembly line operators [Abstract]. A set of force transducers incorporated into a pair of Datacq gloves [Fig.2] for recording the forces exerted by both hands, together with a force triggered image capturing facility [p. 1050, col. 2] for assessing the posture of the hands during the activity, is combined with on-line/playback software to allow non-medical staff to assess the assembly process, including

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the maximum forces applied, and a measure of the effort or work done per assembly cycle [Abstract]. Physiological information is made available for post processing and further medical analysis [Fig. 7], as well as for database archiving programs [p. 1052, col. 2]. The system has generic applications for ergonomic design and manufacturing processes involving humans, in the quest to avoid repetitive health problems, such as strain injury in the upper body. The system also serves as a tool to monitor the design of new product types, as well as setting ergonomically relevant quality targets for sub-contractor supplied components [Abstract].

***Claim Rejections under 35 U.S.C. § 103***

4. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering the objective evidence present in the application indicating obviousness or nonobviousness.

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4.1 Claims 3, 6 and 17 are rejected under 35 U.S.C. § 103 as being unpatentable over the article authored by Allen et al. (hereinafter Allen), entitled "Application of Virtual Reality Devices to the Quantitative Assessment of Manual Assembly Forces in a Factory Environment".

4.2 Allen does not specifically disclose physiological measurements for people in the 5<sup>th</sup> - 95<sup>th</sup> percentile of a target population. However, the examiner takes Official Notice that limiting the physiological measurements to people in the 5<sup>th</sup> - 95<sup>th</sup> percentile of a target population is old and well known. Allen does teach of capturing quantitative measurements of manual forces and postures applied by human assembly line operators [Abstract]. It would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the target population of human assembly line operators in Allen to be limited by the percentile range of the present invention, because it would be useful in quantifying the forces needed for assembly operations in conjunction with the posture adopted by the operators, wherein the information could be used as biofeedback to redesign any stages or give better training for the task that could potentially give rise to awkward physiological strains [p. 1052, col. 2].

### ***Response Guidelines***

5. A shortened statutory period for response to this action is set to expire **3 (three) months and 0 (zero) days** from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned (see MPEP 710.02, 710.02(b)).

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**6. Any response to the Examiner in regard to this non-final action should be**

**directed to:** Russell Frejd, telephone number (703) 305-4839, Monday-Friday from 0630 to 1500 ET, or the examiner's supervisor, Kevin Teska, telephone number (703) 305-9704. Any inquiry of a general nature should be directed to the Tech Center 2100 receptionist, telephone number (703) 305-3900. The TC 2100 Customer Service telephone number is (703) 306-5631.

**mailed to:** Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:** (703) 746-7238 (After Final Communications), or  
(703) 746-7239 (Official Communications), or  
(703) 746-7240 (for Status Inquiries or Draft Communications).

*Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Fourth Floor (Receptionist).*

**Date:** 15-December-2003



**RUSSELL FREJD  
PRIMARY EXAMINER**